

B1 end

1 4. (Once amended) A crystal growth method according to claim 1, wherein the
2 compound semiconductors A and B are alternatively grown by MOCVD on a substrate with the
3 thickness of the layers varying from one to another to form a multi-layered buffer.

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1 12. (Once amended) A group-III nitride compound semiconductor, comprising:
2 a MOCVD-grown periodic or non-periodic multi-layered buffer having at least
3 three layers with each layer having a thickness in the range from 2 nm to 6 nm on a substrate
4 grown at a first temperature in which the layers alternate between at least two types of compound
5 semiconductors A and B different from each other in lattice constant, energy band gap, layer
6 thickness, and composition; and
7 a MOCVD-grown layer of a group-III nitride compound semiconductor on the
8 formed multi-layered buffer wherein said layer of group-III is formed at a temperature that is
9 higher than said first temperature.

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1 13. (New) A method as recited in claim 1 wherein a total buffer thickness is less than
2 96 nm.

1 14. (New) A method as recited in claim 1 wherein a total buffer thickness is less than
2 48 nm.
